♂. Head silvery greyish white pollinose with a yellowish tinge in certain lights. Antennae blackish, the apex of the second and base of the third, except above, reddish; third joint one-fourth longer than second; arista brown, vibrissae situated above the anterior oral tip a distance equal to two-thirds the length of the second antennal segment; palpi reddish. Eyes separated by not over half the length of the second antennal joint.

Mesonotum black, the lateral margin and obscure sub-dorsal vittae greyish pollinose: Scutellum reddish with narrow black base and sides.

Legs black. Wings lightly infuscated. Squamae white, halteres fuscous with part of knob and base reddish. Several fine pale brownish hairs beneath inner end of squamae.

Abdomen black, the third to fifth segments reddish on the broad sides, except the narrow apex of each; abdomen thinly greyish pollinose, the apices of the segments darker, the pollen appearing somewhat tessellate in certain views. Carina of posterior forceps long, triangular, its short end somewhat concave, the apex not at all flattened or widened; the outer forceps wholly broad, still broadened at the middle and narrowed to the acute apex which bears a short, curved hook. One pair of discals on second and third segments.

Holotype—♂, Aweme, Manitoba, May 20, 1920 (P. N. Vroom); No. 795, in the Canadian National Collection, Ottawa.

Paratype—♂, Aweme, May 28, 1921 (H. A. Robertson).

A New Species of Ant from Kansas (Hym.: Formicidae).

By M. R. Smith, A. and M. College, Mississippi.

The writer has recently received a species of ant from Kansas, which appears to be new. The ants which belong to the genus *Pheidole* were found attacking the seed of sorghum at Manhattan, Kansas, by Professor W. P. Hayes. At a superficial glance one would be inclined to assign them to the species *vinelandica*, but a more careful study will bring out certain characters which are certainly distinct from those of *vinelandica*. The more important differences in the two are given in this paper. Because of the fact that this ant is apparently new and

also because of the fact that it has shown some tendency to become an economic pest in Kansas, the writer has drawn up the following description of this ant and named it *hayesi,* in honor of Professor Hayes, its collector.

Pheidole hayesi sp. nov.

Soldier. Length: 2.5 mm-3 mm.

Head, excluding mandibles, somewhat longer than broad, about as broad behind as in front, with distinctly excised posterior border, a faint, yet definite, occipital furrow and prominently rounded angular lobes; sides sub-convex to convex. Eyes small, oval, slightly convex, considerably less than one-third the distance from the anterior to the posterior corners of the head. Mandibles not strongly convex, with two prominent apical and usually one or more small basal teeth. Clypeus flattened, smooth throughout, with a pronounced excision in the anterior border, the two edges of the excision forming angulate teeth. Antennal scapes reaching to about the middle of the head, slender, distinctly curved at the base. Club as long as, or longer than, the rest of the funiculus. Frontal area triangular, impressed. Mesonotum when viewed in profile appears flattened dorsally and angulate posteriorly. Meso-epinotal constriction deep, well pronounced. Epinotum with the base as long as, or longer than, the declivity, the former broadly grooved dorsally. The spines short, coarse, the tips reflexed outward and downward. Petiole longer than broad, the sides concave. Node flattened above or with a faint excision. Postpetiole less than twice as broad as the petiole, the sides angulate or conulate. Gaster smaller than the head, subspherical.

Mandibles shining, sparsely punctate and longitudinally striated basally. Clypeus, frontal area, and the posterior half of the head smooth and shining, the latter very noticeably so. Anterior half of the head subopaque, longitudinally striated, the striations in the regions of the eyes more parallel and well defined than elsewhere. Thorax anteriorly and laterally rugulose and subopaque; the dorsal surfaces of the pronotum and mesonotum somewhat smooth and shining. The petiole laterally and ventrally punctulate, subopaque. Postpetiole, dorsally, smooth and shining. Gaster polished and shining.

Hairs pale yellowish; rather coarse, sub-erect on head, antennae and legs, longer, more erect and of unequal length on thorax, petiole, postpetiole and gaster.

Ferruginous brown; legs lighter and more yellowish, gaster dark brown.

Worker. Length: 1.5 mm-2 mm.

Head, excluding the mandibles, about as broad as long, with convex sides and a faint emargination of the posterior border. Eyes barely anterior to the middle of the sides of the head. Mandibles with two definite apical and several small, irregular, basal teeth. Clypeus smooth, with straight, entire, anterior border. Antennal scapes reaching almost to the posterior corners of the head. Frontal carinae short. Frontal area well pronounced, sub-triangular, free from ridges. Thorax somewhat similar to that of the soldier but lacking the angular humeri. Petiole as in the soldier. Postpetiole less than twice as broad as the petiole, with the sides only faintly or slightly angular but not conulate as in the soldier. Gaster smaller than the head. Femora and tibiae of legs well developed.

Head with the exception of the antennae and cheeks distinctly shining, cheeks and antennae subopaque, the former with longitudinal rugae. Dorsal surface of the pronotum and the mesonotum smooth and shining. Epinotum and the pleurae of the mesonotum punctulate, opaque. Petiole and postpetiole smooth and shining dorsally, the sides subopaque. Gaster smooth and shining.

Hairs of the same color as in the soldier, over all portions of the body, numerous and erect on the scapes and funiculi of the antennae.

Dark brown, almost black, mouth parts and appendages lighter.

Described from eleven soldiers and five workers, all of which are in the writer's collection. These specimens were sent to the writer by Professor W. P. Hayes of the Entomology Department of the Kansas State Agricultural College, Manhattan, Kansas.

Professor Hayes found this species attacking sorghum seed at Manhattan. In a letter to the writer, he stated: "They construct small earthen mounds from one and three-fourths to two inches in diameter and often carry small bits of the attacked seed to the surface, where it is scattered over the mound." Because of this seed-eating habit this ant is assuming the role of an economic pest.

After a very careful study of this species the writer feels convinced that *hayesi* is more closely related to *Pheidole vinelandica* than to any other ant of this group. Not only is this true of the general size and shape of the ant, but it is also true of its

habits. The two species are so closely related that a further study of more specimens of *hayesi* from various localities may result in *hayesi* being given subspecific rank. The sides of the head in *hayesi* are more convex than those of *vinelandica*, the posterior angles of the head of the former are more angulate than are the corners of the head of *vinelandica*, which are very broadly rounded. The thorax of *hayesi* is anteriorly and laterally rugulose, the thorax of *vinelandica* is distinctly punctulate on the sides of the mesonotum and epinotum, and particularly on the dorsal surface of the epinotum. There are also other differences of minor importance. The shape of the head and the sculpture of the thorax are the two most outstanding differences in the two.

Handy Collecting Apparatus.

By WILLIAM E. HOFFMANN, Division of Entomology, University of Minnesota.

During the past season the writer found a large number of *Microvelia hinei* Drake and set about to get as many as possible. After an hour and more of real effort the catch was counted and found to number but a dozen. This was a real disappointment as this species had not been found in such numbers before and a large series was desired. The specimens for the most part were on the surface of water only one or two inches deep. A few of them were found on the mud at the edge of the water and many more of them ran from the water to the flat mud bank when disturbed. They are unlike *M. borealis* Bueno or *M. americana* Uhler in this respect, for these species will run out upon the water when disturbed. The *M. hinei* were found in a rather restricted area on this small pond, a strip some twelve or more feet in length. They were seldom found more than three feet from the water's edge. There was a dense growth of *Typha* here and because of this and also because of the shallow water, an ordinary water net was of little use. The collecting was given up for the day with the firm conviction that some better means of collecting must be devised to take this species in numbers.